

Calendar

Wed., January 24

12:00 p.m. Wellness Works
Brown Bag Seminar - Curia II
Speaker: J. Fitzsimmons,
Assistant States Attorney for
Kane County

Title: Avoiding Internet
Predators and Scams

3:30 p.m. DIRECTOR'S
COFFEE BREAK - 2nd Flr X-
Over

4:00 p.m. Fermilab Colloquium
- 1 West

Speaker: G. Gabrielse,
Harvard University
Title: New Measurement of the
Electron Magnetic Moment and
the Fine Structure Constant

THERE WILL BE NO
FERMILAB ILC R&D
MEETING THIS WEEK

Thurs., January 25

11:00 a.m. Academic Lecture
Series - 1 West
Speaker: E. Lunghi, Fermilab
Title: Course 3, Part 2 – Flavor
Physics In and Beyond the
SM; CP Violation

2:30 p.m. Theoretical Physics
Seminar - Curia II

Speaker: P. Fox, Lawrence
Berkeley National Laboratory
Title: Reheating Metastable
O'Raifeartaigh Models

3:30 p.m. DIRECTOR'S
COFFEE BREAK - 2nd Flr X-
Over

THERE WILL BE NO
ACCELERATOR PHYSICS
AND TECHNOLOGY
SEMINAR TODAY

THERE WILL BE NO ALCPG
ILC PHYSICS AND
DETECTOR SEMINAR THIS
WEEK

[Click here](#) for NALCAL,
a weekly calendar with links
to additional information.

What's in a name?

Barn



There's more than one kind of barn at Fermilab.

The time: 1942, in the ominous early days of World War II. The place: Purdue Memorial Union, Lafayette, Indiana. The people: Manhattan Project physicists Marshall Hallaway and Charles Baker. The event: a dinner conversation that would change the future of physics. Over dinner, Hallaway and Baker tried to devise a good term for the target area that a nuclear particle represents in a collision. They dismissed "Oppenheimer" and "Bethe" as candidates, and then considered John Manley, director of the Purdue group at Los Alamos, where the atomic bomb was being built. But the double-syllabic "Manley" was cumbersome; and the first name, "John," could be confused with other meanings.

The physicists considered that the area of 10^{-24} cm² -- a typical nuclear cross-section -- was quite big in the realm of particle physics. In fact, it was relatively "as big as a barn." The name was snappy, and it stuck -- but only inside the collaboration, and not in public. Because of the need for communicating Manhattan Project information as secretly as possible by telephone, the term "barn" was immediately classified, and wasn't officially declassified by the government until 1948.

Now particle physics laboratories like Fermilab

From ES&H

Common Sense



This column is written by ES&H Director Bill Griffing (left).

A few weeks ago I had the opportunity to travel to CERN. It's impossible not to be impressed with the sheer magnitude of the operation, the size of the detector halls, and the scale of the detectors taking shape within them. Daily meetings are essential to coordinate the myriad work activities going on simultaneously as the LHC approaches start-up. There is still much work to be done to get the CMS detector assembled and to finish the infrastructure around it. But those responsible for the work understand that the schedule is secondary to job safety.

In comparing worker safety between Europe and the U.S., I found that I had some misconceptions. I did not expect to see the strong commitment to safety that was evident from my tours and from our interactions with the workers we encountered along the way. And I was very impressed with the leadership of the CERN Safety Commission as well. I learned that many objective observers consider Europe to be far ahead of the United States when it comes to worker safety. From my own observations, I can say that I did see some practices that tended to support that assertion, but I don't think the differences are dramatic.

I also learned that Europeans don't necessarily have a completely factual view of worker safety in the U.S., either. In discussions, I repeatedly heard that worker safety in Europe was rooted in "common sense," implying directly or indirectly that in the U.S. it is not. When I finally tired of hearing this, I pressed my guide to explain why he felt

Weather**Snow Flurries 25°/12°**[Extended Forecast](#)[Weather at Fermilab](#)**Current Security Status**[Secon Level 3](#)**Wilson Hall Cafe****Wednesday, January 24**

-Portabello Harvest Grain
 -Santa Fe Chicken Quesadilla
 -Teriyaki Chicken with Vegetables
 -Beef Stroganoff
 -Triple Decker Club
 -Assorted Slice Pizza
 -Pesto Shrimp Linguini with Leeks and Tomatoes

[Wilson Hall Cafe Menu](#)**Chez Leon****Wednesday, January 24****Lunch**

Grilled Salmon Fillet with Scallion Sauce
 Winter Vegetable Medley
 Mocha Profiteroles

Thursday, January 25**Dinner**

Bacon Wrapped Sea Scallops
 Ancho Fired Pork Tenderloin
 Sweet Potato Stew
 Rum Raisin Soufflé

[Chez Leon Menu](#)

Call x4598 to make your reservation.

Archives[Fermilab Today](#)[Result of the Week](#)[Safety Tip of the Week](#)[ILC NewsLine](#)**Info**

use "barns" to describe the success of their colliders. Reports of reaching "one inverse femtobarn," indicating a great number of collisions over a tiny area, made big news at Fermilab in 2005. Though the definition of the term is complex, even non-physicists can have a conceptual understanding of the connection between barns, collisions and success at the Tevatron.

--Siri Steiner

[Learn more](#) about barns--and how they are used by particle physicists now.

Letter to the Editor**To the Editor:**

Thank you for your article on the Dark Energy Survey in yesterday's issue of Fermilab Today. However, I must clarify one significant point. Readers may have received the impression that the Department of Energy and the National Science Foundation have approved the Dark Energy Survey. In fact, DES has just begun the process that DOE and NSF will use to decide whether to approve the project and request funding for the construction of a Dark Energy Camera. Unless and until the project receives agency approval and is funded by Congress, we remain in the R&D phase. Although we are working on prototypes, the camera construction itself must await approval.

John Peoples
 Director, Dark Energy Survey

In the News**From Science Daily, January 23, 2007:****Synchrotron for neutral molecules built**

BERLIN, Jan. 23 (UPI) -- German scientists reported the construction and successful operation of the world's first synchrotron for neutral molecules.

Gerard Meijer and colleagues at the Fritz-Haber Institute, part of the Max Planck Society in Berlin, said the device could open a new avenue for the study of collisions between molecules, promising unique insights into their physical properties and chemical reactions.

Synchrotrons are devices in which particles move in synchronized bunches in a circular path. They are widely used in high-energy particle physics, such as at Fermilab in the United States.

that we in the U.S. don't apply a common-sense approach to safety. He told me that he and his colleagues believed that in the U.S., we are so prescriptive as to safety precautions that people are not allowed to apply common sense in matters of safety. "After all," he said, "you are the nation that requires coffee to be labeled with 'hot' warnings." I suppose we have our legal system to thank for that perception.

During my visit, I was invited to give a presentation on our approach to worker safety to the CERN Safety Commission leadership. I also heard a presentation about the changes underway in CERN's approach to its their worker safety program. I believe the exchange benefited both partners, and was an important step in opening a dialogue between CERN and Fermilab that will lead to improvements in both our safety programs.

Milestones**Sharon Austin to retire**

Sharon Austin, a Fermilab employee since 1981, will retire January 31, 2007. Austin has contributed to a number of projects at the lab, including Tevatron spool production, SiDet, e-cool and high-field magnet R&D. Prior to these assignments, she was part of Detector Support in the Physics Section and Detector R&D in the Particle Detector Group.

An informal retirement party is scheduled for January 31 at 3:00 p.m. in Lab 6; feel free to stop by to say goodbye.

Announcements**Ask-a-Scientist**

Fermilab's Ask-a-Scientist program is looking for volunteers to discuss physics with the public once or twice a year. The program takes place on the 15th floor of Wilson Hall on select Sunday afternoons. Contact Peter Garbincius (garbincius@fnal.gov) for more details; read more about the program [here](#).

Brown Bag Seminar on Internet Safety

Wellness Works presents a Brown Bag Seminar on Internet Safety, "Avoiding Internet Predators and Scams," offered by Justin Fitzsimmons, Assistant States Attorney for Kane County. The seminar will be held today, January 24, from Noon to 1 p.m. in Curia II.

[Upcoming Activities](#)

Fermilab Today is online at:
www.fnal.gov/today/

Send comments and
suggestions to:
today@fnal.gov

But the new German device, with a
circumference of 32 inches, is said to be the
first synchrotron to work with electrically
neutral particles.

[Read More](#)

